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ARTEFACT EDUKIT: ENGINEERING



“Today, we are failing too many of our children.



“Today, we are failing too many of our children. We’re sending them into a 21st century economy through the doors of 20th century schools.”

Barack Obama | President of United States



By 2018, the U.S. will have over 1 million job openings in Science-related fields, yet only

**16% of U.S. bachelor's degrees
will specialize in Science, Technology,
Engineering and Math.**

U.S. Department of Labor | 2012



As a nation,



As a nation,

**we are not graduating nearly
enough science related majors
to supply that demand.**



“To create a robust and open pipeline for Science, Technology, Engineering and Math,

we need to begin at the elementary level.”

Tony Murphy | Director of the National Center for STEM Elementary Education



**S.T.E.M.,
from the
government's
perspective.**



Many programs are tackling this problem. You may have heard about

S.T.E.M Education,

a nationwide initiative that will implement



Science



Technology



Engineering



Math

into U.S. public school curriculum within the next 5 years.

What makes this problem even more pressing, is that next year,

Washington State public elementary schools will be required to implement S.T.E.M. curriculum, with a focus on engineering.



Engineering

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Why engineering?

Engineering utilizes skills in

Creativity

Collaboration

Critical Thinking

which address the demands of the

21st century.

**S.T.E.M.,
from the
teacher's
perspective.**



“The teachers are the ones who can give the students the tools to be successful.

**This is an
incredibly
empowering
yet
intimidating
task.”**

Joanne | Professional Development for Educators



“The [S.T.E.M.] curriculum is only effective to a certain degree. There is a lack of underlying infrastructure for

teachers to learn and then teach the S.T.E.M. curriculum”

Sonia | Professional Development for Science Educators



For many teachers, teaching Engineering is an

**unfamiliar subject, overwhelming
to learn, and difficult
to incorporate into
existing curriculums.**



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**How can we empower teachers
to teach Engineering
to their students?**



Our iterative approach



Research

Feedback



Brainstorm

Evaluate



Design

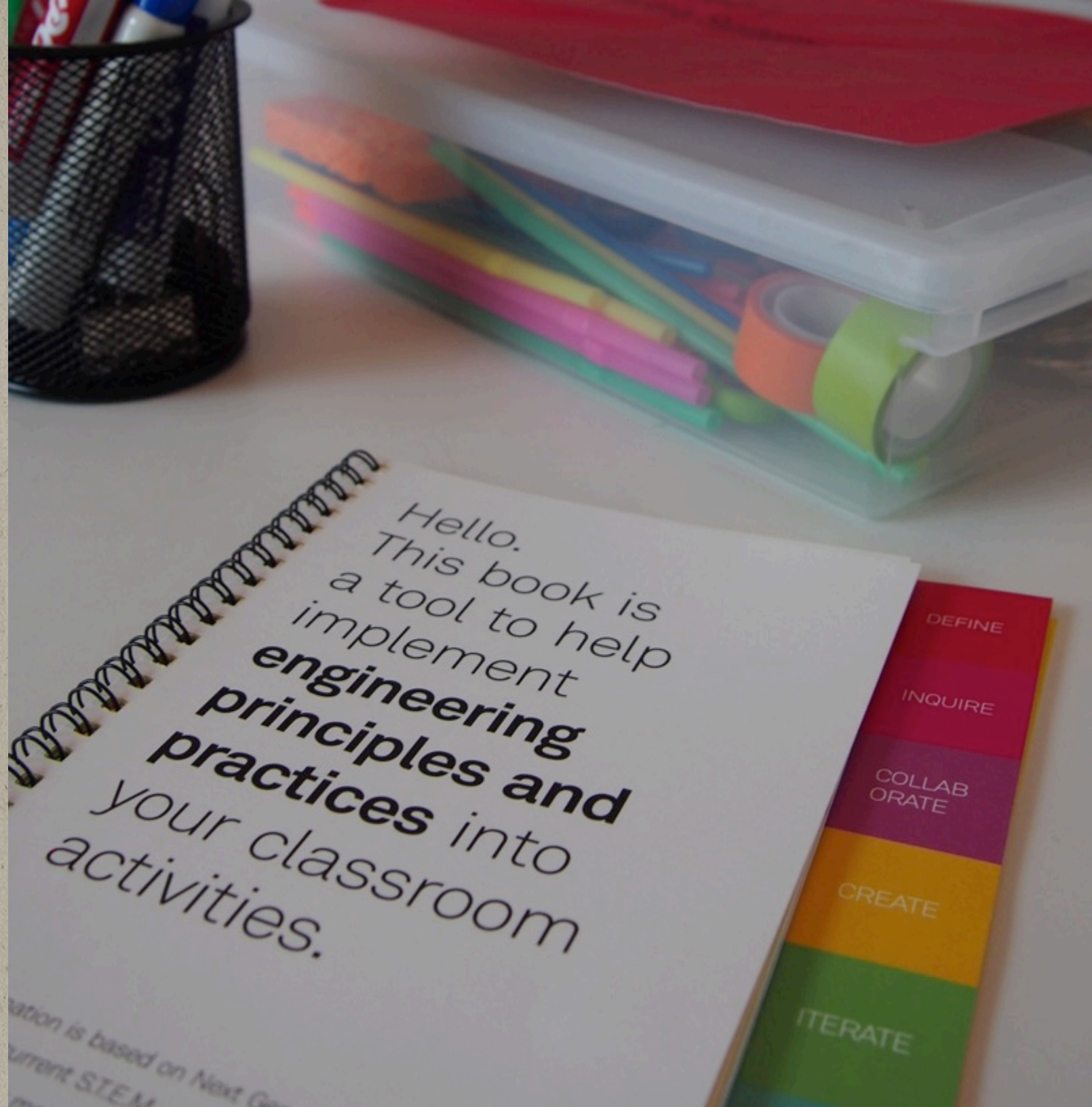
Iterate



Meet Artefact EduKit: Engineering



A concise,
approachable
and actionable
tool for
teachers to
understand
and teach
engineering.



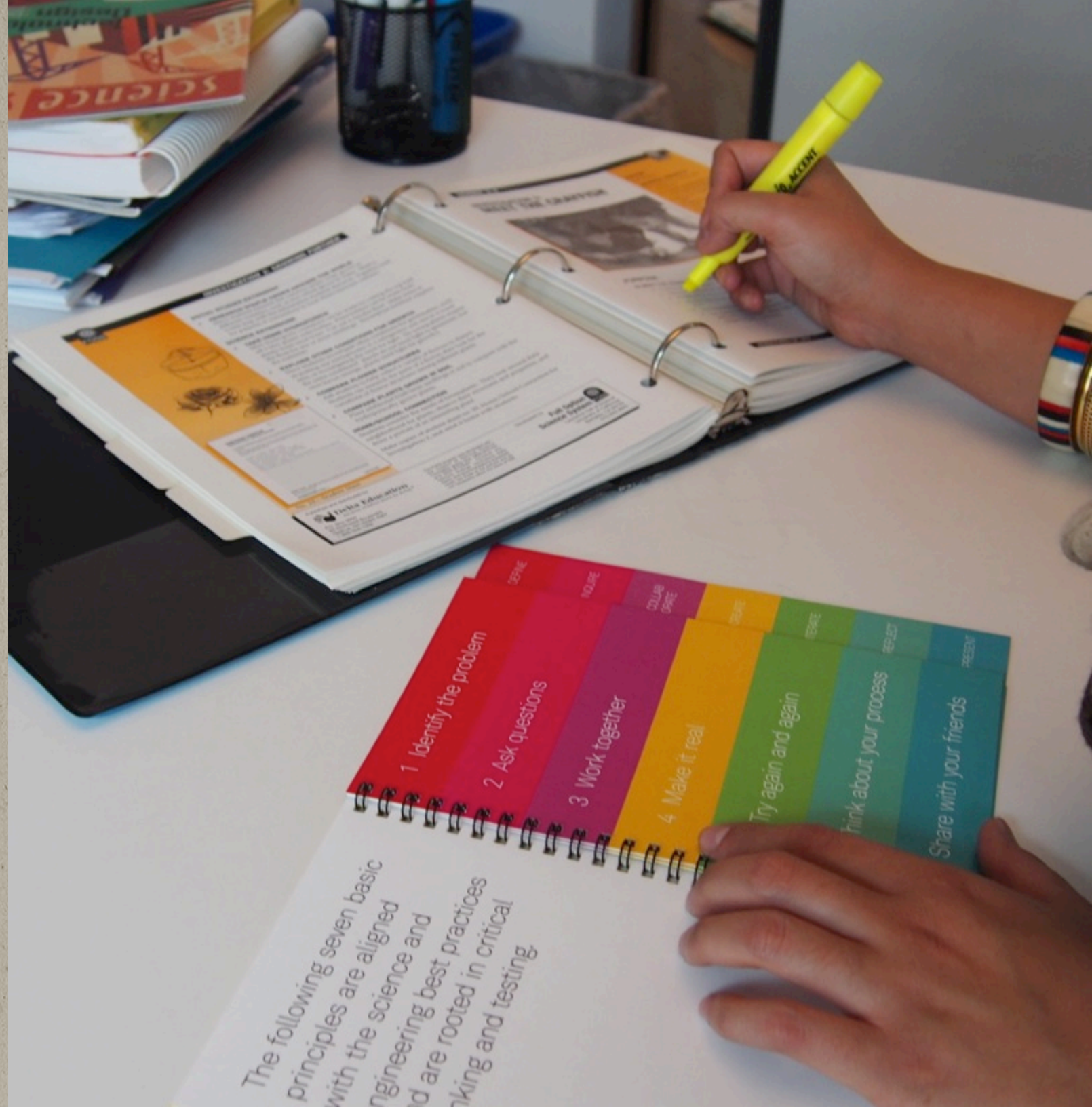
Let's get started.

What is engineering?
Let's reframe it and think about it differently. How about,

What can we
do with
engineering?

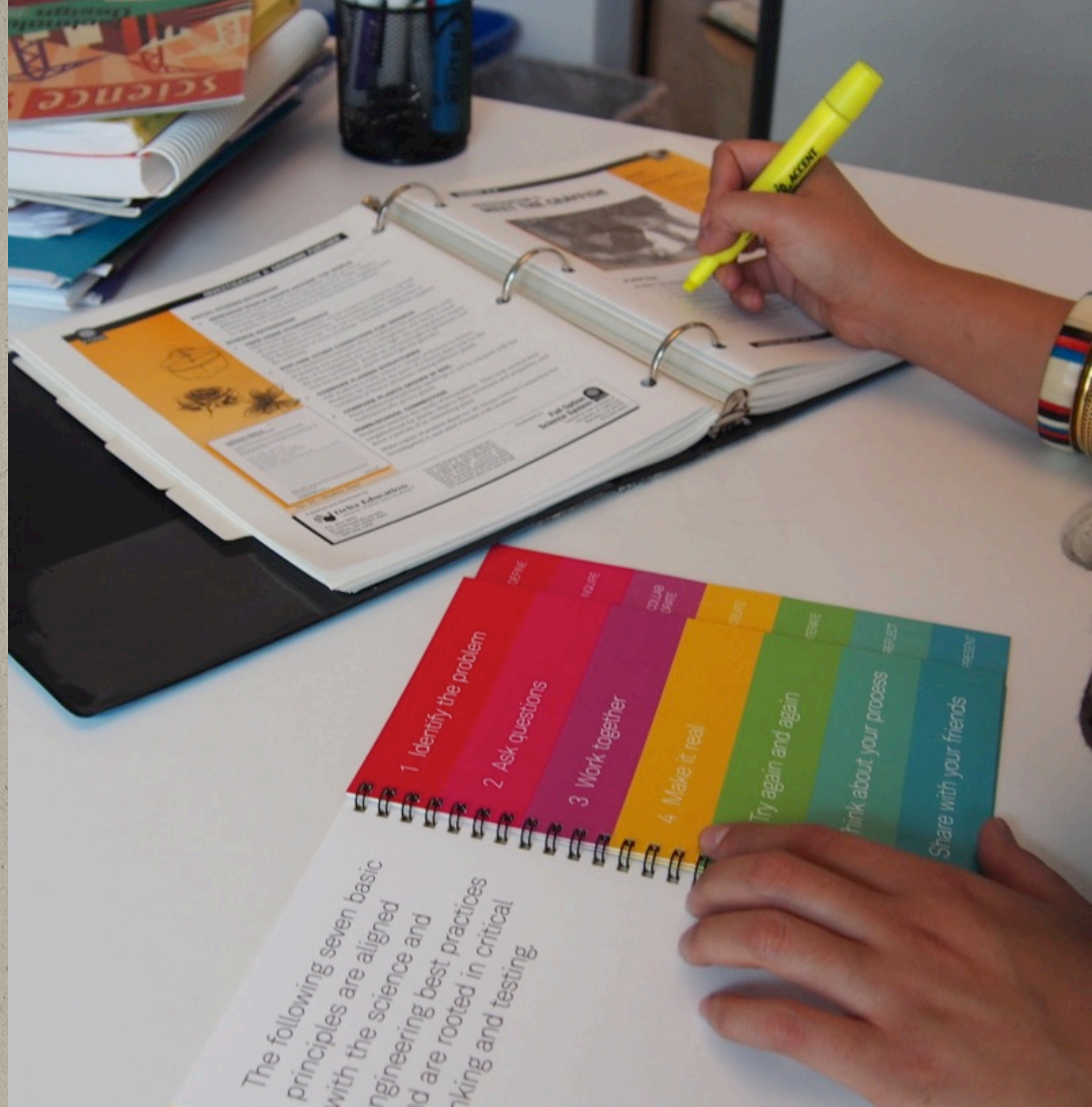


To teach students how to apply engineering, follow these seven basic principles that are aligned with engineering best practices and are rooted in critical thinking and testing.



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1. Define
2. Inquire
3. Collaborate
4. Create
5. Iterate
6. Reflect
7. Present



By providing an example and template of an engineering curriculum, such as Earth's Systems, the EduKit provides

specific references to help guide teachers in creating their own lesson plans.



From start to finish,

**Artefact
EduKit
guides and
empowers
teachers to
do what they
do best,
teach.**



**Feedback from
Teachers,
Principals,
Professional Development
Educators,
Parents
And
Students.**



**“EduKit manages
to translate the complex
and overwhelming
engineering concepts into
a clear and concise
language and format.”**

Washington Elementary School Teacher

“What a simple and effective way of reframing a topic I try to tackle every day. It’s amazing what looking at something differently can do.”

Washington Elementary School Assistant Principal

“What

“A concise and useful
take-away. A small
reference like this makes it
easy for me to read
and take action from.”

Washington Elementary School Teacher

“This is absolutely the kind of tool our teachers would find helpful. It's fun, engaging and powerful.”

Washington STEM Alliance Member

“Realistically, I barely have enough time to eat lunch during the school day. It’s means a lot that **this tool considers a teacher’s actual schedule.”**

Washington Elementary Elementary Teacher

**“This tool makes me
excited to get into the
classroom and teach.”**

Washington Elementary School Teacher

Artefact EduKit: Engineering is

a crucial step in empowering
teachers to teach engineering.

We are all born with a natural sense of curiosity and creativity

**Let's give teachers the tools to
nurture our innate abilities and raise
the next generation of engineers.**





Artefact is an award-winning technology product design company dedicated to defining next-generation products and user experiences that lead to preferable outcomes for society, humanity, and the environment.

Founded in 2006 by design leaders Gavin Kelly and Rob Girling, Artefact helps forward-thinking businesses and organizations around the world through strategic practices in design, research, and technology. Artefact has earned a reputation for delivering keen insights, effective execution, and world-class design for leading consumer electronics and technology brands.

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